

Throttle Body for Forklifts

Throttle Body for Forklift - The throttle body is a component of the intake control system in fuel injected engines to be able to control the amount of air flow to the engine. This particular mechanism works by placing pressure upon the operator accelerator pedal input. Usually, the throttle body is placed between the air filter box and the intake manifold. It is usually connected to or positioned close to the mass airflow sensor. The biggest component within the throttle body is a butterfly valve referred to as the throttle plate. The throttle plate's main task is to regulate air flow.

On many styles of cars, the accelerator pedal motion is communicated via the throttle cable. This activates the throttle linkages that in turn move the throttle plate. In cars with electronic throttle control, likewise referred to as "drive-by-wire" an electric motor controls the throttle linkages. The accelerator pedal is attached to a sensor and not to the throttle body. This sensor sends the pedal position to the ECU or likewise known as Engine Control Unit. The ECU is responsible for determining the throttle opening based on accelerator pedal position along with inputs from other engine sensors. The throttle body consists of a throttle position sensor. The throttle cable is attached to the black part on the left hand side which is curved in design. The copper coil placed close to this is what returns the throttle body to its idle position after the pedal is released.

The throttle plate turns in the throttle body each time the driver presses on the accelerator pedal. This opens the throttle passage and permits a lot more air to flow into the intake manifold. Typically, an airflow sensor measures this adjustment and communicates with the ECU. In response, the Engine Control Unit then increases the amount of fluid being sent to the fuel injectors in order to produce the desired air-fuel ratio. Frequently a throttle position sensor or likewise called TPS is fixed to the shaft of the throttle plate to be able to provide the ECU with information on whether the throttle is in the wide-open throttle or "WOT" position, the idle position or somewhere in between these two extremes.

In order to regulate the minimum air flow while idling, various throttle bodies can include adjustments and valves. Even in units which are not "drive-by-wire" there will usually be a small electric motor driven valve, the Idle Air Control Valve or also called IACV that the ECU utilizes so as to control the amount of air that can bypass the main throttle opening.

In several automobiles it is normal for them to have one throttle body. So as to improve throttle response, more than one can be used and connected together by linkages. High performance cars like the BMW M1, together with high performance motorcycles like the Suzuki Hayabusa have a separate throttle body for each cylinder. These models are referred to as ITBs or likewise known as "individual throttle bodies."

The throttle body and the carburetor in a non-injected engine are quite the same. The carburetor combines the functionality of both the fuel injectors and the throttle body into one. They can control the amount of air flow and mix the air and fuel together. Vehicles which include throttle body injection, which is called CFI by Ford and TBI by GM, put the fuel injectors in the throttle body. This enables an older engine the possibility to be converted from carburetor to fuel injection without considerably altering the engine design.